2009 ADDENDUM TO INTERIM MEASURES WORK PLAN
EAST HELENA FACILITY

2009 SUPPLEMENTAL GROUNDWATER INVESTIGATION

Prepared for:

ASARCO LLC
100 Smelter Road
East Helena, Montana 59635

Prepared by:

Hydrometrics, Inc.
3020 Bozeman Ave
Helena, MT 59601

February 2009

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Asarco File

Linda Jacobson/R8/USEPA/US
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To Greg.Brusseau@brattle.com, Steven Acree/ADA/USEPA/US@EPA, Rick Wilkin/ADA/USEPA/US@EPA, Charles
cc
bcc
Subject Work Plan for new wells to delineate selenium and arsenic plumes

I hope this goes through. Randy, Rick, Steve, and Denise, please let me know if you have any comments within the next two weeks (by 3/27/09). Greg, please let me know if this meets your initial need or you wish to receive further ground water information.

Thanks.

Linda Jacobson

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2009 ADDENDUM TO INTERIM MEASURES WORK PLAN
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2009 SUPPLEMENTAL GROUNDWATER INVESTIGATION

1.0 INTRODUCTION

On May 5, 1998 Asarco and the U.S. Environmental Protection Agency (EPA) entered into a Consent Decree (U.S. District Court, 1998) for the East Helena Facility which initiated the corrective actions process in accordance with the Resource Conservation and Recovery Act (RCRA) program. Under the Consent Decree, Asarco has prepared several site investigation-related documents, including:

- A RCRA Current Conditions/Release Assessment report (CC/RA) (Hydrometrics 1999a);
- An Interim Measures Work Plan, East Helena Facility (Hydrometrics, 1999b);
- A RCRA Facility Investigation (RFI) Work Plan (Hydrometrics, 2000); and
- A Phase I RCRA Facility Investigation Report (Asarco Consulting Inc. (ACI) 2003, revised 2005).

A complete listing of RCRA Consent Decree documents is contained in the Phase I RCRA Facility Investigation (RFI) report.

As part of the Consent Decree, several groundwater-related interim measures were implemented between 1999 and 2001. These earlier interim measures (IM) are discussed in Section 1.2 of the RFI Report (2005 version). In May 2002, a RCRA Interim Measures Work Plan Addendum (IMWPA) was prepared (Hydrometrics, 2002). The 2002 IMWPA addressed groundwater concerns in the intermediate aquifer within the City of East Helena

and downgradient residential groundwater supplies north of the Asarco plant site. These interim measures are discussed in Section 1.2.1.3 of the IMWPA.

The RFI addresses remaining elements of the site that are not addressed as part of the IM process and will provide sufficient data to develop corrective measures alternatives. The information gathered by the RFI will be used to prepare a RCRA Corrective Measures Study (CMS) for the East Helena Facility. The RFI is being conducted in two phases. The Phase I RFI addressed site characterization requirements not addressed in previous investigations or IM efforts. The Phase II RFI will consist of an assessment of human health and ecological risk, as well as additional site characterization requirements. As part of Phase II, a Risk Assessment (RA) Work Plan will be developed based largely on the data and evaluation presented in the Phase I RFI Site Characterization Report. The Phase II RA Work Plan will address risk assessment objectives, additional data requirements, and procedures for conducting the risk assessment. The development of the Phase II RFI Risk Assessment is discussed in Section 7.0 of the RFI report. The development of the Phase II RFI including the RA Work Plan is presently being conducted.

On February 3, 2009, Asarco received EPA's January 28, 2009 letter requiring Asarco to submit an addendum to the groundwater interim measures work plan for the installation of additional groundwater monitoring wells. This 2009 Supplemental Groundwater Investigation plan is an addendum to the 1999 Interim Measures Work Plan for the East Helena Facility (Hydrometrics, 1999b) and has been prepared in response to the EPA letter. The purpose of this work plan addendum is to describe groundwater investigation activities proposed for 2009 beyond those activities previously proposed. Specifically, this work plan addendum describes the planned drilling and completion of additional monitoring wells northwest of the plant site to further delineate the leading edge of the intermediate aquifer selenium plume.

1.1 SUMMARY OF GROUNDWATER MONITORING RESULTS

Asarco has conducted groundwater and surface water monitoring at the East Helena Plant Site and surrounding area since 1984 under both CERCLA and RCRA regulatory programs. The current water resources monitoring program includes groundwater sampling at approximately 145 monitoring wells, several residential, municipal and industrial water supply wells, and surface water sampling on Prickly Pear Creek (five sites) and Lower Lake. The current groundwater monitoring and test well network, including 13 monitoring wells installed in 2008, is shown on Figure 1-1. Relevant findings of the ongoing groundwater monitoring program are as follows:

- Groundwater at the site generally flows in a north to northwest direction from the plant site toward and west of East Helena. Seasonal potentiometric maps for the 2006 through 2008 period are included in Appendix A.

- Primary sources of groundwater recharge include seepage from Upper Lake and Lower Lake on the plant site, and Prickly Pear Creek north of the plant site.

- The majority of the plant site is underlain by a single sand and gravel aquifer with the aquifer base defined by a low permeability ash layer. In the northern portion of the plant and areas further north into the East Helena area, the aquifer becomes thicker and is divided into the shallow aquifer and the deeper intermediate aquifer. In some areas, the two groundwater systems are separated by a silt/clay layer. The transition from the single to dual-groundwater system occurs in the northern portion of the plant site near monitoring well DH-66 (Figure 1-1).

- Monitoring results for the past several years have detected elevated arsenic concentrations in both the shallow and intermediate aquifers, leading to the mapping of two distinct arsenic plumes. The shallow and intermediate arsenic plumes, as defined by the November 2008 sampling results, are shown in Figures 1-2 and 1-3, respectively. Previously identified arsenic source areas include the Speiss-Dross (S-D) Area and the Former Acid Plant Sediment Drying (APSD) Area. Both of these source areas have been hydrologically isolated through construction of slurry walls

(keyed into the ash layer) and temporary caps. These actions were completed in 2006 (APSD area) and 2007 (S-D Area) under the Interim Measures program.

- More recently, elevated concentrations of selenium have been detected in the shallow and intermediate aquifers (Figures 1-4 and 1-5).

The northward extent of the shallow and intermediate arsenic plumes is reasonably well defined by the past groundwater monitoring results. While the same can be said of the shallow selenium aquifer, the northwestern extent of the intermediate selenium aquifer is not well defined by the current groundwater monitoring network (Figure 1-5). Delineation of the leading edge of the intermediate aquifer selenium plume is the focus of the 2009 Supplemental Groundwater Investigation described in this work plan addendum.

1.2 STATUS OF INTERMEDIATE AQUIFER SELENIUM PLUME

As described above, both the shallow and intermediate arsenic plumes and the shallow aquifer selenium plume are well defined in terms of their northwestern (downgradient) extent. However, the intermediate aquifer selenium plume extends beyond the downgradient (northwest) monitoring wells, precluding complete delineation of the downgradient boundary. The six downgradient monitoring wells completed within the intermediate aquifer are listed in Table 1-1 along with the most recent selenium concentration data. Three of these wells, EH-118, EH-119 and EH-120 were completed by Asarco in spring 2008 to better delineate the plume boundary.

As shown in Table 1-1, selenium concentration trends over the past two years near the downgradient wells vary from being very stable (well EH-117), to exhibiting consistent increases with time (EH-116). Concentrations at monitoring well EH-114 exhibit seasonal variation, with concentrations notably higher in the spring as compared to fall, and the seasonal trend superimposed on a trend of overall increasing concentrations. Of the three wells completed in 2008, EH-118 and EH-119 exhibit consistent increases in selenium concentrations from May to November 2008, while concentrations at EH-120 were relatively constant throughout the year.

TABLE 1-1. INTERMEDIATE AQUIFER SELENIUM CONCENTRATIONS IN DOWNGRADIENT MONITORING WELLS

Well	Selenium Concentration (dissolved) mg/L					
	May 2007	July 2007	November 2007	May 2008	July 2008	November 2008
EH-114	0.246	0.242	0.066	0.408	0.297	0.235
EH-116	0.212	0.208	0.245	0.305	0.398	0.402
EH-117	0.187	0.142	0.195	0.172	0.187	0.181
EH-118	na	na	na	<0.005	0.014	0.051
EH-119	na	na	na	0.065	0.119	0.28
EH-120	na	na	na	0.105	0.135	0.121

na – not available; well completed in 2008.
Well locations shown on Figure 1-1.

At first glance, the 2008 selenium concentrations at wells EH-118 and EH–119 suggest that the plume boundary may have advanced though this area at about the same time the wells were completed, or spring 2008. A review of the general groundwater chemistry however suggests this may not be the case. Drilling at EH-118 and EH–119 was complicated by the presence of "heaving sands," or saturated sands which upwell into the well casing. In order to displace the heaving sand, significant amounts of water were added to the wells during drilling, with the drill water obtained from Upper Lake. The Upper Lake water has a calcium concentration similar to Prickly Pear Creek, or about 30 mg/L. As shown in Table 1-2, the 2008 calcium concentrations in EH-118 and EH–119 were relatively low for groundwater (40 to 109 mg/L), and increased with each sampling event. Conversely, calcium concentrations at well EH-120, where less water was added during drilling (and selenium concentrations were stable during 2008), averaged about 250 mg/L, which is considered to be more representative of typical groundwater concentrations. Based on this information, the selenium concentration trends at EH-118 and EH–119 may be influenced by the addition of "clean" water during drilling, as opposed to recent advancement of the plume boundary through the well area. These wells are scheduled for quarterly sampling in 2009 to further evaluate spatial and temporal water quality trends in this area.

TABLE 1-2. 2008 CALCIUM CONCENTRATIONS IN DOWNGRADIENT INTERMEDIATE AQUIFER MONITORING WELLS

	May 2008	July 2008	November 2008
EH-118	40 mg/L	52 mg/L	68 mg/L
EH-119	53 mg/L	64 mg/L	109 mg/L
EH-120	248 mg/L	241 mg/L	268 mg/L

2.0 SUPPLEMENTAL INVESTIGATION OF THE INTERMEDIATE AQUIFER SELENIUM PLUME

At the request of EPA, Asarco will construct additional monitoring wells in 2009 downgradient (northwest) of the plant site. The purpose of the new monitoring wells is to further delineate the downgradient extent of the intermediate aquifer selenium plume and to better define the general hydrogeologic conditions near the selenium plume boundary. The proposed wells are listed in Table 2-1 and are shown on Figure 2-1.

TABLE 2-1. PROPOSED MONITORING WELL COMPLETION DETAILS

Proposed Well Designation	Target Aquifer	Anticipated Depth (ft)	Purpose
EH-123	Intermediate	60	Delineate southwest plume boundary
EH-124	Intermediate	70	Delineate northwest plume boundary
EH-125	Intermediate	70	Delineate northwest plume boundary
EH-126	Intermediate	70	Delineate northwest plume boundary
EH-127	Intermediate	70	Delineate northeast plume boundary

Well locations shown on Figure 2-1.

2.1 PROPOSED WELL LOCATIONS AND DEPTHS

The five supplemental monitoring wells will be located along an arc spanning from north to west of the current downgradient (northwest) monitoring wells (Figure 2-1). The well locations are staggered, with EH-126 located further downgradient (northwest) than the other proposed wells to increase the overall monitoring network coverage and better assess the northwest extent of the plume. All five proposed wells are located on Asarco-owned property.

The new wells will be completed in the intermediate aquifer immediately above the low permeability ash layer. Based on the depth to ash in nearby wells, proposed wells EH-124, EH-125, EH-126 and EH-127 are expected to be 70 feet or more in total depth. Peripheral well EH-123 is expected to be about 60 feet in depth (based on a depth to ash of 55 feet in

nearby well EH-118). In all cases, drilling will extend into the ash layer so the aquifer base can be positively identified, with the wells completed just above the ash layer.

2.2 CONSTRUCTION OF NEW MONITORING WELLS

The 2009 supplemental monitoring wells will be drilled using air rotary methods to penetrate the extensive boulders, cobbles, and gravel typical of the East Helena area. Well drilling, construction and documentation procedures will be consistent with the EPA-approved Interim Measures Work Plan, East Helena Facility (Hydrometrics, 1999b), and the RCRA Facility Investigation (RFI) Work Plan (Hydrometrics, 2000). All drilling will be supervised by a qualified scientist or engineer, with detailed lithologic and construction logs recorded during drilling.

Table 2-2 summarizes the monitoring well construction details. All wells will be constructed of 2-inch ID (inside diameter) NFS-approved schedule 40 PVC with flush threaded joint couplings and factory slotted screen. The wells will be screened across the bottom 10 to 20 feet of the intermediate aquifer (see Table 2-2), with the borehole annulus backfilled with silica sand from the well bottom to five feet above the top of screen to provide a filter pack. The remainder of the borehole annulus will be backfilled with bentonite chips/pellets or bentonite slurry to seal the borehole annulus and prevent fluid migration along the outer well casing. All well construction and grouting details will be consistent with State of Montana monitoring well construction regulations (ARM 36.21.800) while maintaining consistency with previous well construction procedures for the project. Figure 2-2 shows typical construction details for an intermediate aquifer monitoring well.

2.3 SUPPLEMENTAL GROUNDWATER MONITORING AND TESTING PROGRAM

Following well construction, the new monitoring wells will be developed, tested and sampled in accordance with procedures and techniques defined in the EPA-approved Interim Measures Work Plan, East Helena Facility (Hydrometrics, 1999b), and the RCRA Facility

TABLE 2-2. MONITORING WELL CONSTRUCTION DETAILS

Well	Casing Size/ Type	Expected Depth	Screen Type/ Length	Expected Screen Interval	Sandpack Type/Length	Expected Sandpack Interval
EH-123	2" ID Schedule 40 PVC, flush thread	60 ft	2" ID Sch. 40 PVC, 10-slot, flush tread/10 ft	50 to 60 ft	10/20 Colorado Silica Sand/ 15 ft	45 to 60 ft
EH-124	2" ID Schedule 40 PVC, flush thread	70+ ft	2" ID Sch. 40 PVC, 10-slot, flush tread/20 ft	50 to 70 ft	10/20 Colorado Silica Sand/ 25 ft	45 to 70 ft
EH-125	2" ID Schedule 40 PVC, flush thread	70+ ft	2" ID Sch. 40 PVC, 10-slot, flush tread/20 ft	50 to 70 ft	10/20 Colorado Silica Sand/ 25 ft	45 to 70 ft
EH-126	2" ID Schedule 40 PVC, flush thread	70+ ft	2" ID Sch. 40 PVC, 10-slot, flush tread/20 ft	50 to 70 ft	10/20 Colorado Silica Sand/ 25 ft	45 to 70 ft
EH-127	2" ID Schedule 40 PVC, flush thread	70+ ft	2" ID Sch. 40 PVC, 10-slot, flush tread/20 ft	50 to 70 ft	10/20 Colorado Silica Sand/ 25 ft	45 to 70 ft

All depths in feet below ground surface

Investigation (RFI) Work Plan (Hydrometrics, 2000). Well development will include repeated surging and bailing to remove fine sediment from around the screen and improve the hydraulic connection with the aquifer.

Following completion and development, the new wells will be incorporated into the May, July and November 2009 groundwater monitoring events. The wells will be sampled in accordance with the EPA approved Updated Monitoring Program – February 2008 (Asarco, 2008), with the samples analyzed for the list of parameters applicable to the particular monitoring event. Sample analyses will include field testing for pH, specific conductance, dissolved oxygen, water temperature and static water level, and laboratory analysis of dissolved metals/arsenic, arsenic and selenium speciation, common ions and general chemistry. All sampling and testing procedures will be in accordance with the Interim Measures Work Plan, East Helena Facility (Hydrometrics, 1999b), and the RCRA Facility Investigation (RFI) Work Plan (Hydrometrics, 2000).

In addition to water quality sampling, slug testing will be conducted on the new wells to estimate the aquifer hydraulic conductivity. Testing will be conducted in accordance with procedures described in the Interim Measures Work Plan, East Helena Facility (Hydrometrics, 1999b), and the RCRA Facility Investigation (RFI) Work Plan (Hydrometrics, 2000).

3.0 2009 SUPPLEMENTAL MONITORING PROGRAM SCHEDULE AND BUDGET

Following written approval from EPA, monitoring well construction is scheduled to begin in late March or April 2009, and is expected to take one to two weeks to complete. Well development will occur in April/early May so that the wells can be included in the May 2009 seasonal groundwater monitoring event (as well as the July and November 2009 monitoring events). Slug testing will occur either before (late April/early May) or after (June) the May groundwater monitoring event (Table 3-1).

Estimated costs for the 2009 well drilling and associated activities are summarized in Table 3-1. The budgeted items include work plan preparation, well drilling and completion, well development and surveying, slug testing, water quality sampling, and reporting. The water quality sampling budget assumes the wells will be sampled in May, July and November 2009. The reporting task includes completion of well lithologic/construction logs and slug testing results, with the sampling results addressed in a separate 2009 groundwater sampling report. The budget is based on completion of five new wells.

TABLE 3-1. ESTIMATED BUDGET FOR 2009 MONITORING WELL COMPLETION AND ASSOCIATED ACTIVITIES

Task	Description	Schedule	Budget (5 Wells)
Work Plan Preparation	Includes completion and distribution of Draft and Final Work Plans and Response to Comments.	February/ March	$2,500
Well Drilling and Completion	Includes costs for drilling contractor, drilling oversight and well logging, and well construction materials.	Late May/April	$37,000
Well Development and Survey	Includes additional well development (beyond that completed during drilling), and surveying for horizontal and vertical control.	April/Early May	$1,500
Slug Testing	Includes all labor and materials for pneumatic slug testing of all new wells.	May or June	$2,000
Sampling and Analysis	Includes sample collection and analyses on all new wells per extended parameter list, 3 sampling events.	May, July and November	$8,500
Reporting	Includes completion of lithologic and well construction logs, and memo report of drilling and slug testing results.	July 2009	$3,000
		TOTAL	**$54,500**

4.0 REFERENCES

Asarco Consulting, Inc., 2003. Phase I RCRA Facility Investigation Report, East Helena Facility. Prepared for ASARCO Inc. February 2003; revised July 2005.

Asarco LLC, 2008. Updated Monitoring Program (February 2008).

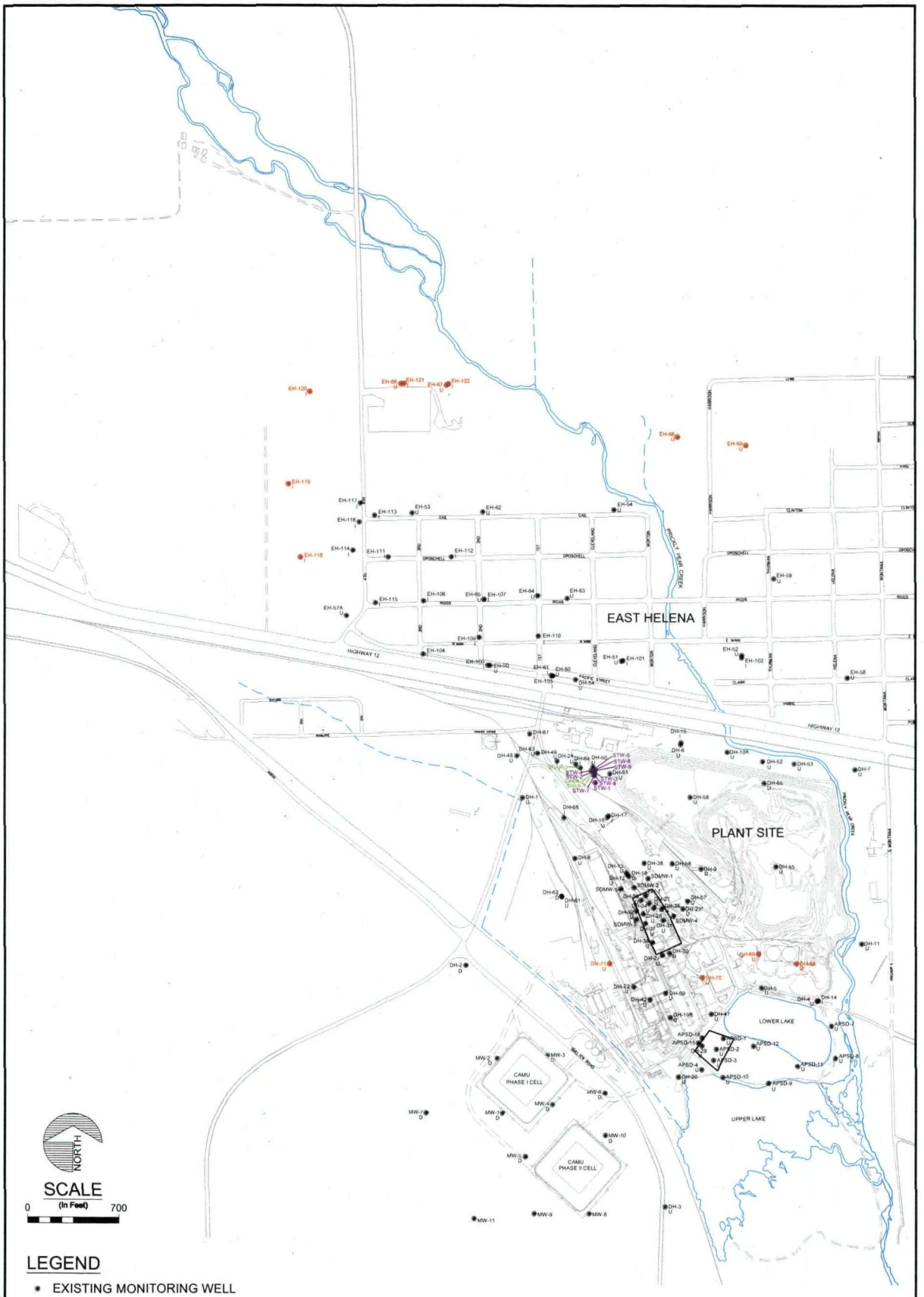
Hydrometrics, 1999a. Current Conditions/Release Assessment, East Helena Facility. Prepared for ASARCO, Inc. September 1998, revised January 1999.

Hydrometrics, 1999b. Interim Measures Work Plan, East Helena Facility. Prepared for ASARCO, Inc. April 1999, Revised July 1999. Includes Volume II, Corrective Action Management Unit Design Report.

Hydrometrics, 2000. RCRA Facility Investigation Work Plan, East Helena Facility, Prepared for ASARCO, Inc. March 2003, revised July 2005.

Hydrometrics, 2002. RCRA Interim Measures Work Plan Addendum. Prepared for ASARCO, Inc. May 2002.

FIGURES



LEGEND

- EXISTING MONITORING WELL
- 2008 MONITORING WELL
- AIR SPARGE MONITORING WELL
- AIR SPARGE WELL
- UPPER AQUIFER
- INTERMEDIATE AQUIFER
- DEEP AQUIFER

2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**ASARCO EAST HELENA FACILITY GROUNDWATER MONITORING AND TEST WELL NETWORK**	FIGURE **1-1**

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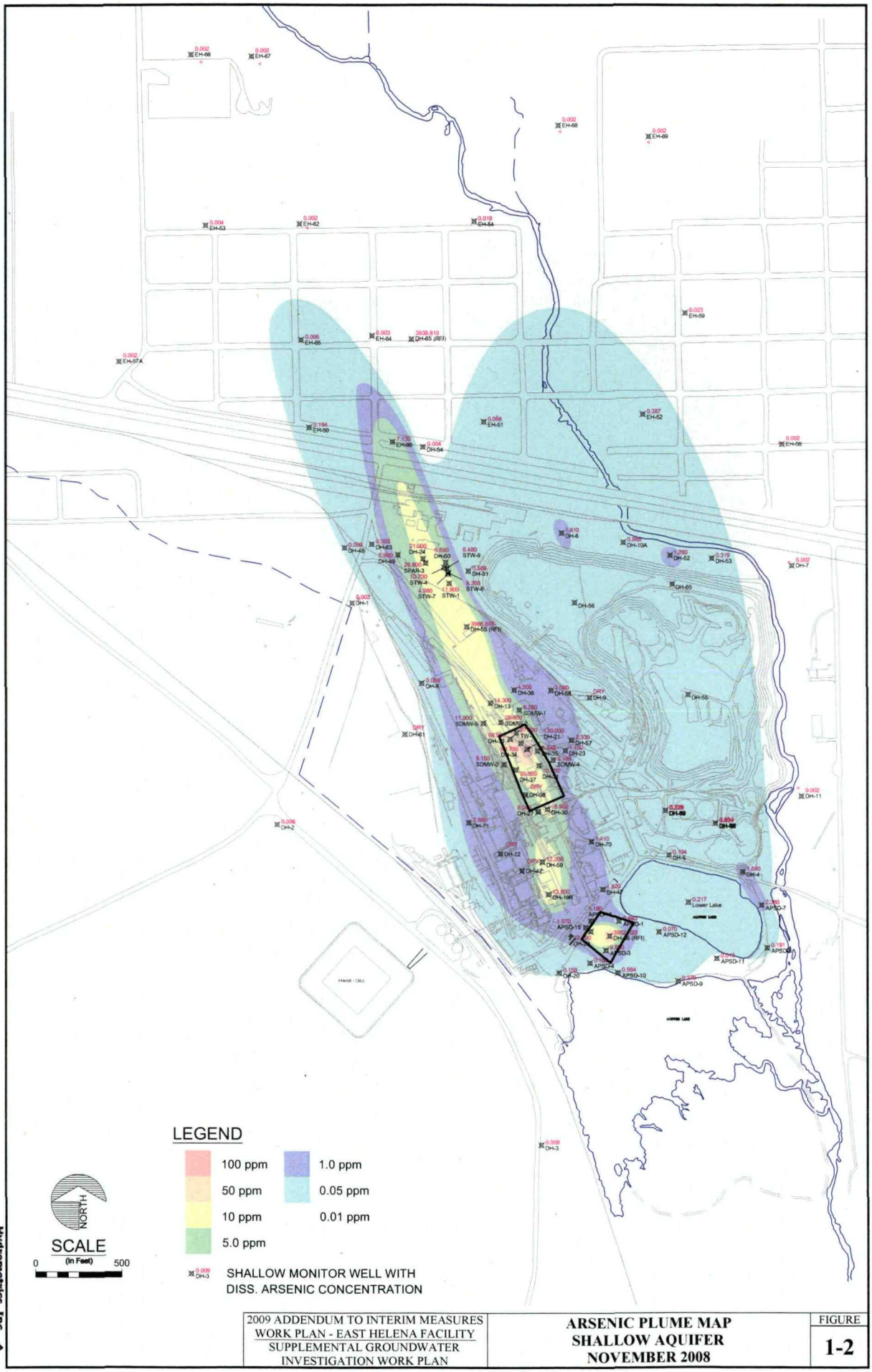

2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**ARSENIC PLUME MAP SHALLOW AQUIFER NOVEMBER 2008**	FIGURE **1-2**

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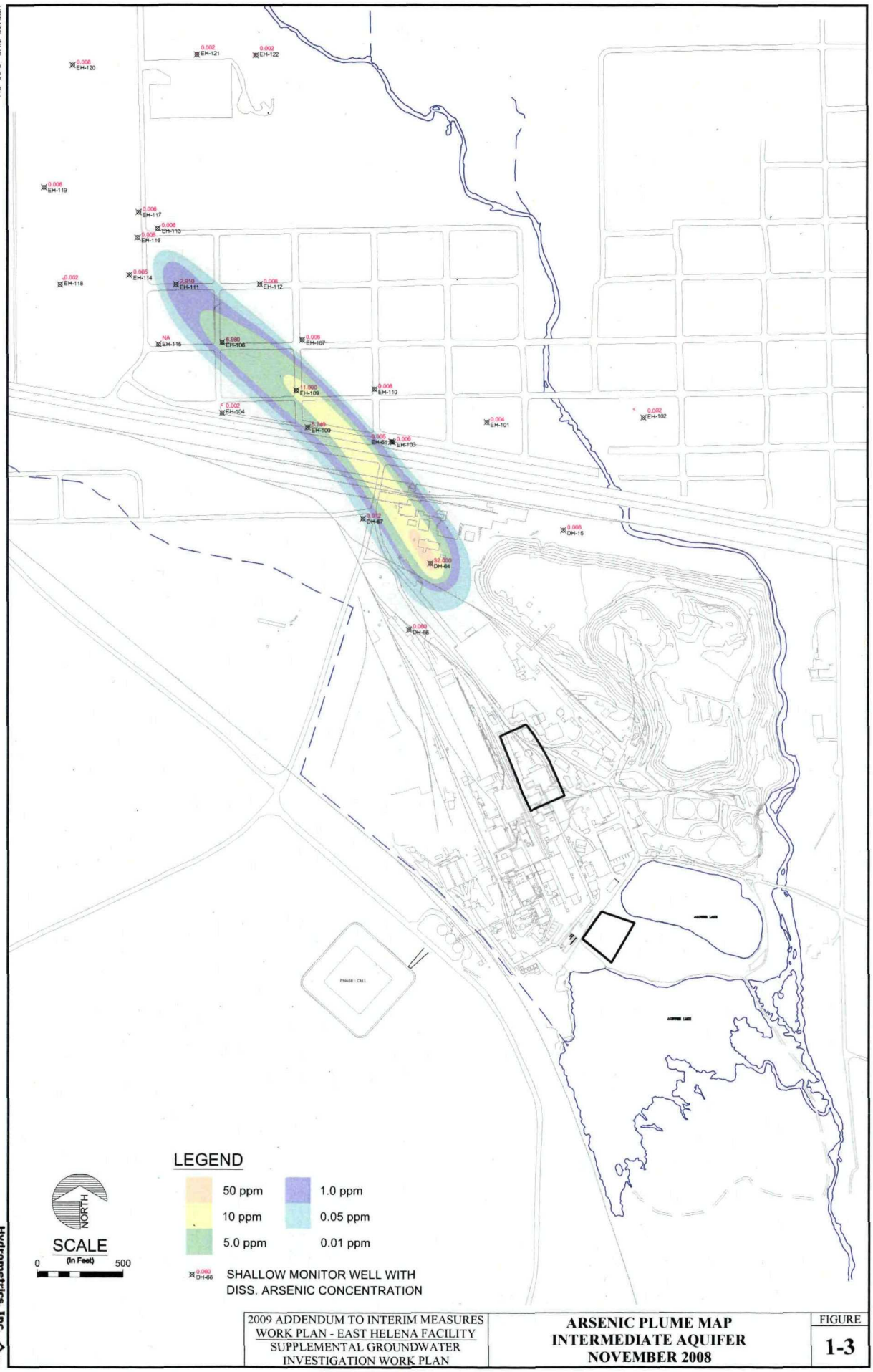

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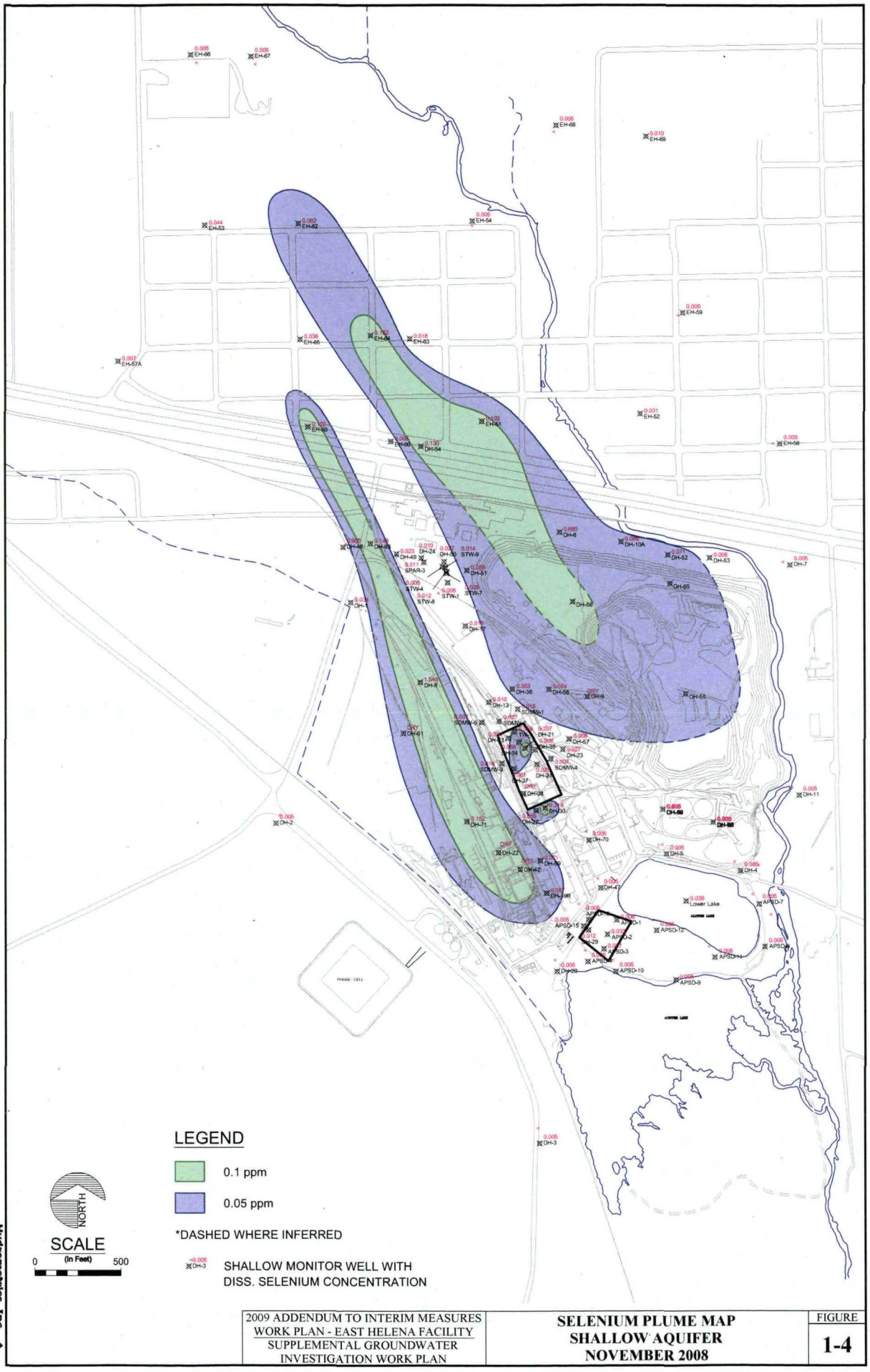
2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**ARSENIC PLUME MAP INTERMEDIATE AQUIFER NOVEMBER 2008**	FIGURE **1-3**



2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**SELENIUM PLUME MAP SHALLOW AQUIFER NOVEMBER 2008**	FIGURE **1-4**

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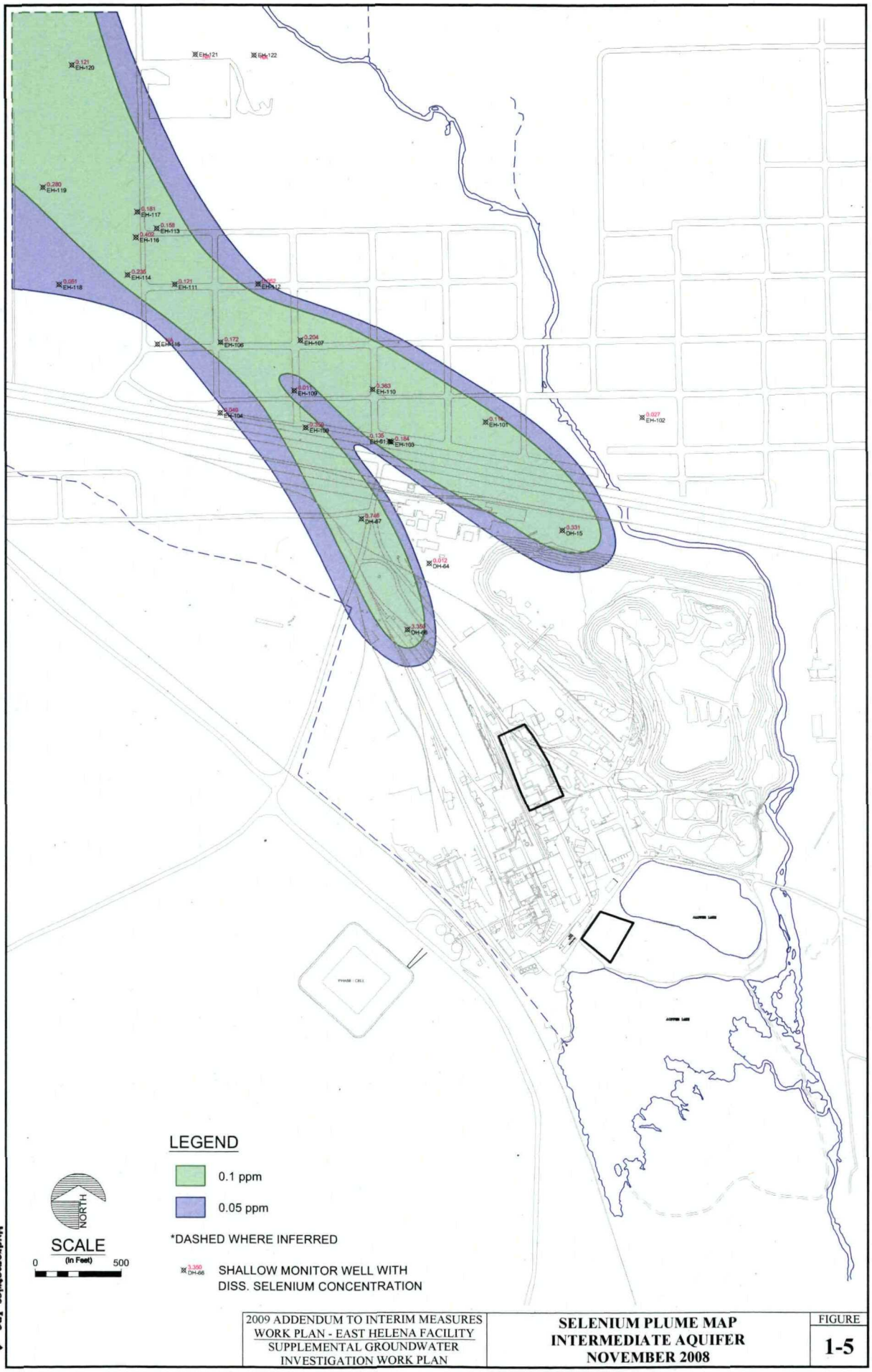

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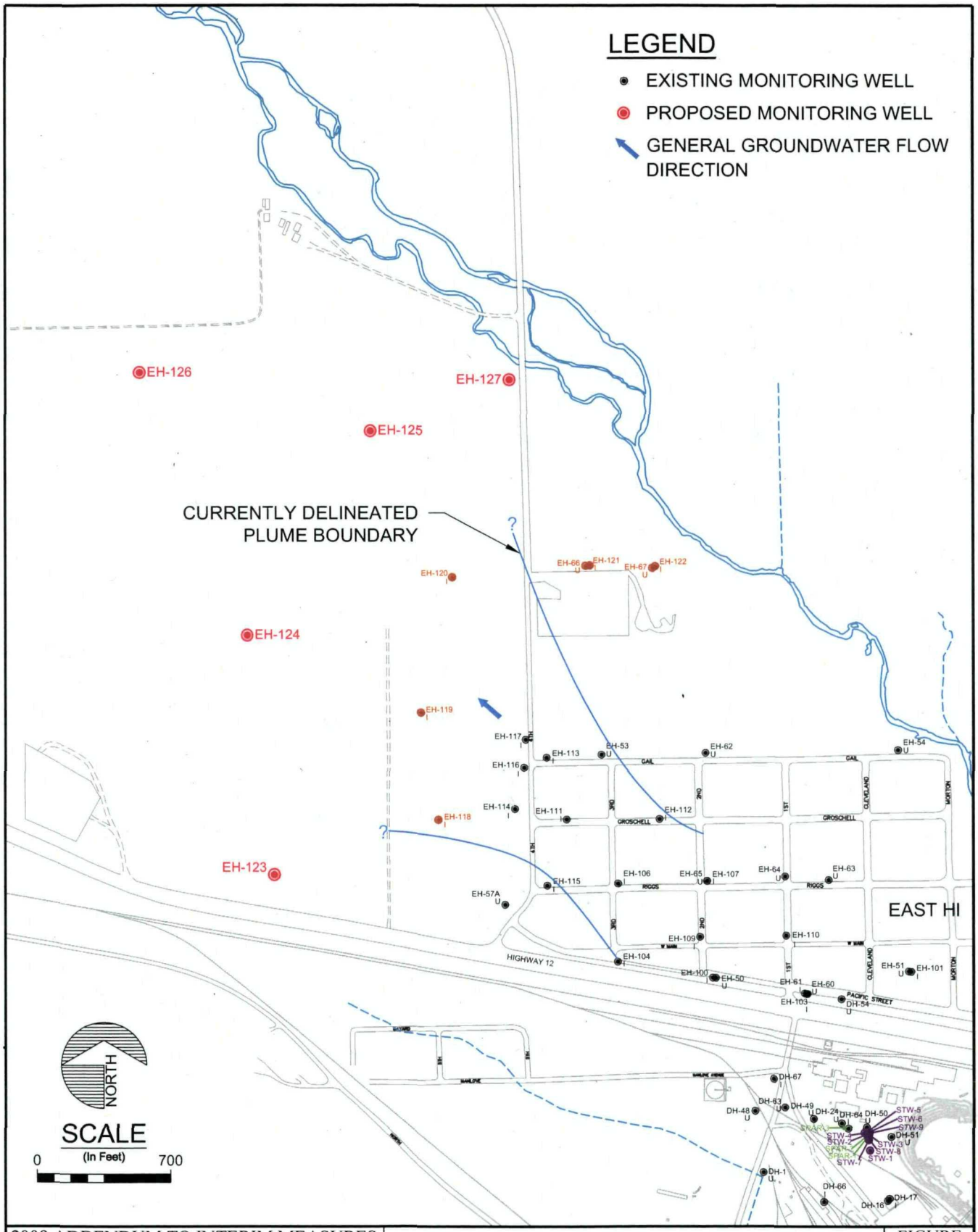
2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**SELENIUM PLUME MAP INTERMEDIATE AQUIFER NOVEMBER 2008**	FIGURE **1-5**



2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**2009 PROPOSED MONITORING WELL LOCATIONS**	FIGURE **2-1**

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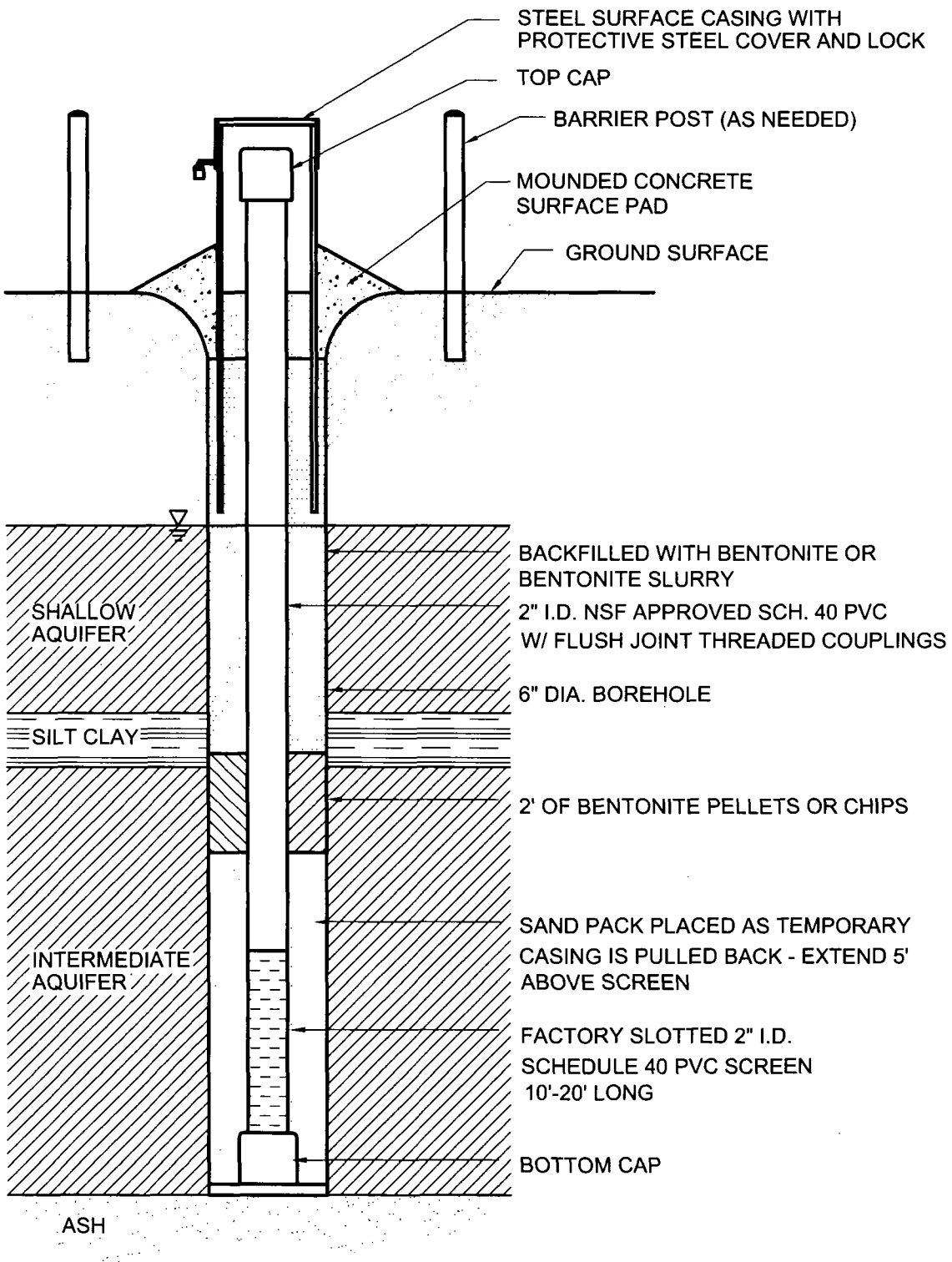

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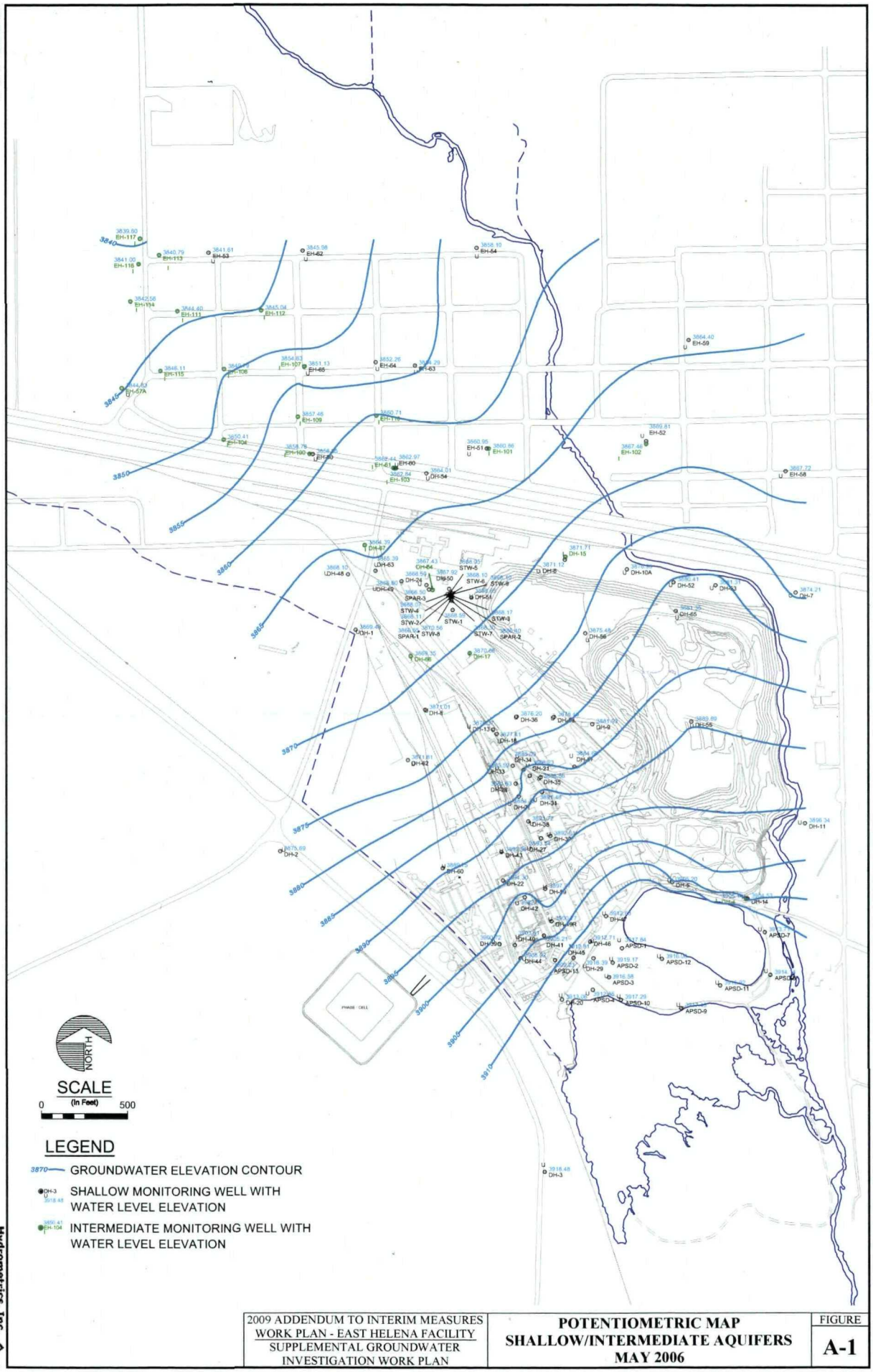
2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**TYPICAL INTERMEDIATE AQUIFER MONITORING WELL CONSTRUCTION**	FIGURE **2-2**

APPENDIX A

2006 THROUGH 2008
SEASONAL GROUNDWATER POTENTIOMETRIC MAPS



2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**POTENTIOMETRIC MAP SHALLOW/INTERMEDIATE AQUIFERS MAY 2006**	FIGURE **A-1**

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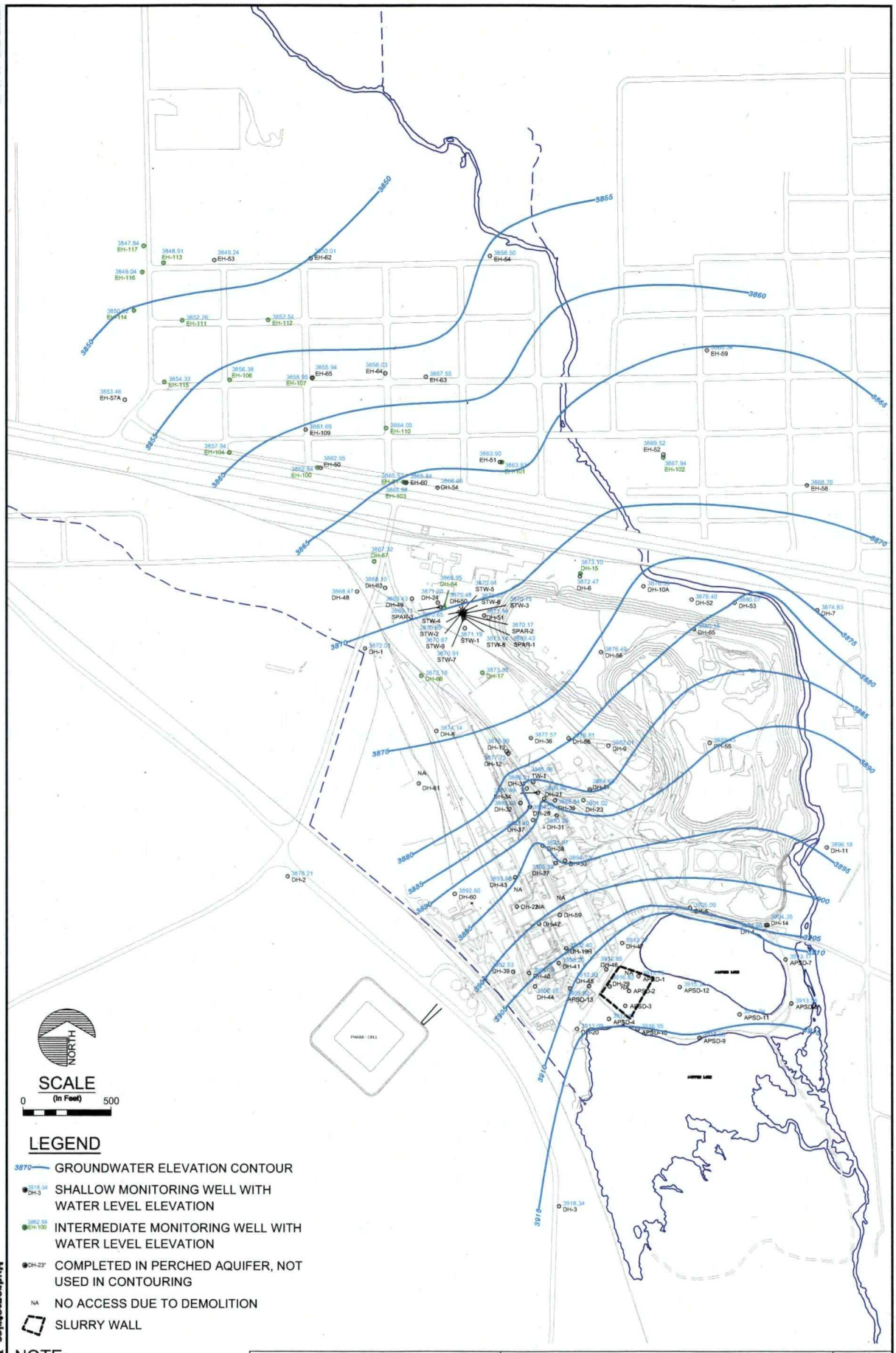
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LEGEND
3870 GROUNDWATER ELEVATION CONTOUR
SHALLOW MONITORING WELL WITH WATER LEVEL ELEVATION
INTERMEDIATE MONITORING WELL WITH WATER LEVEL ELEVATION
DH-23* COMPLETED IN PERCHED AQUIFER, NOT USED IN CONTOURING
NA NO ACCESS DUE TO DEMOLITION
SLURRY WALL
NOTE:
APSD SLURRY WALL CONSTRUCTION IN PROGRESS DURING MONITORING
2009 ADDEMDUM TO INTERIM MEASURES
WORK PLAN - EAST HELENA FACILITY
SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN
POTENTIOMETRIC MAP
SHALLOW/INTERMEDIATE AQUIFERS
NOVEMBER 2006
FIGURE
A-2
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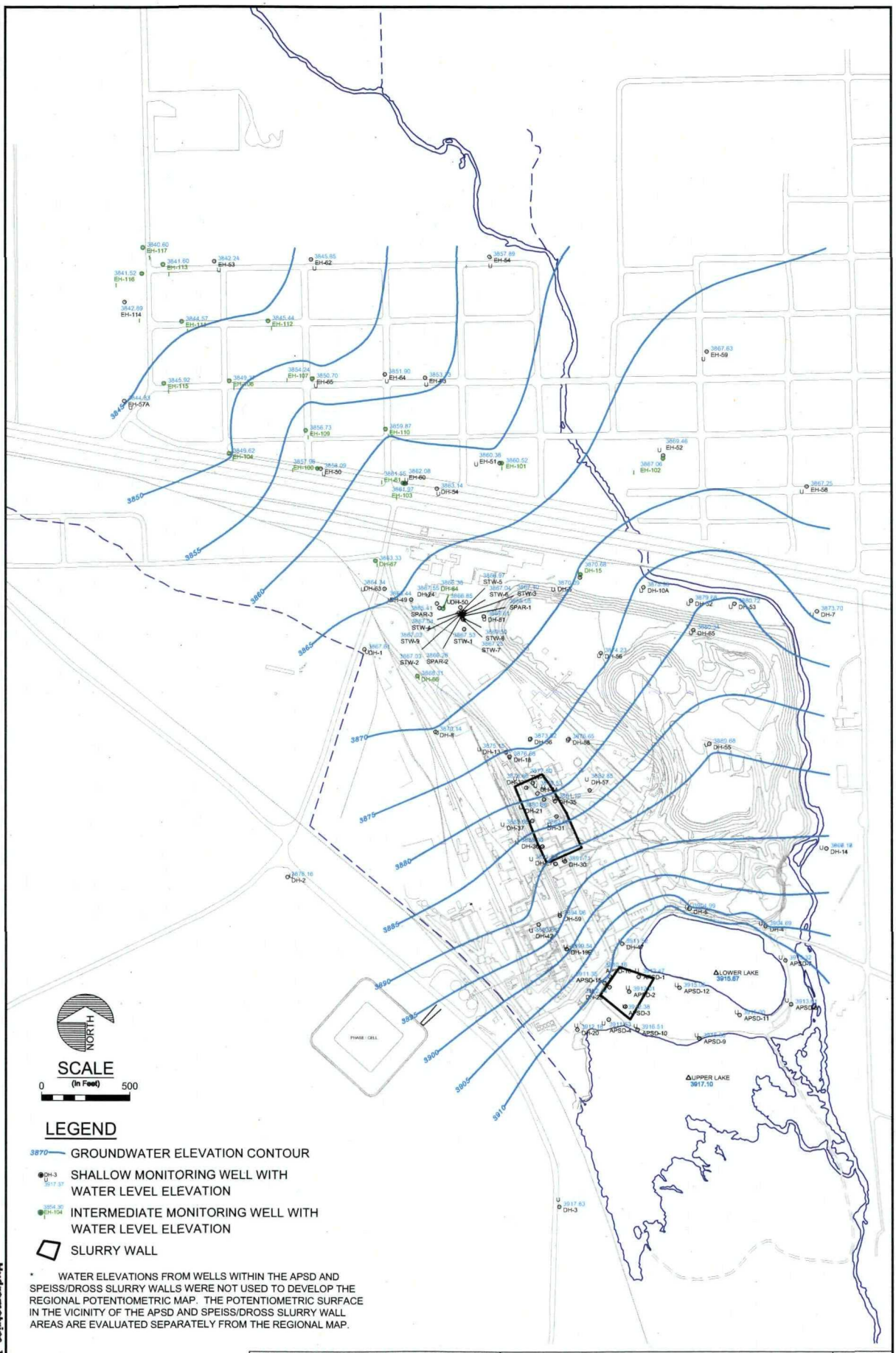

* WATER ELEVATIONS FROM WELLS WITHIN THE APSD AND SPEISS/DROSS SLURRY WALLS WERE NOT USED TO DEVELOP THE REGIONAL POTENTIOMETRIC MAP. THE POTENTIOMETRIC SURFACE IN THE VICINITY OF THE APSD AND SPEISS/DROSS SLURRY WALL AREAS ARE EVALUATED SEPARATELY FROM THE REGIONAL MAP.

2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**POTENTIOMETRIC MAP SHALLOW/INTERMEDIATE AQUIFERS MAY 2007**	FIGURE **A-3**

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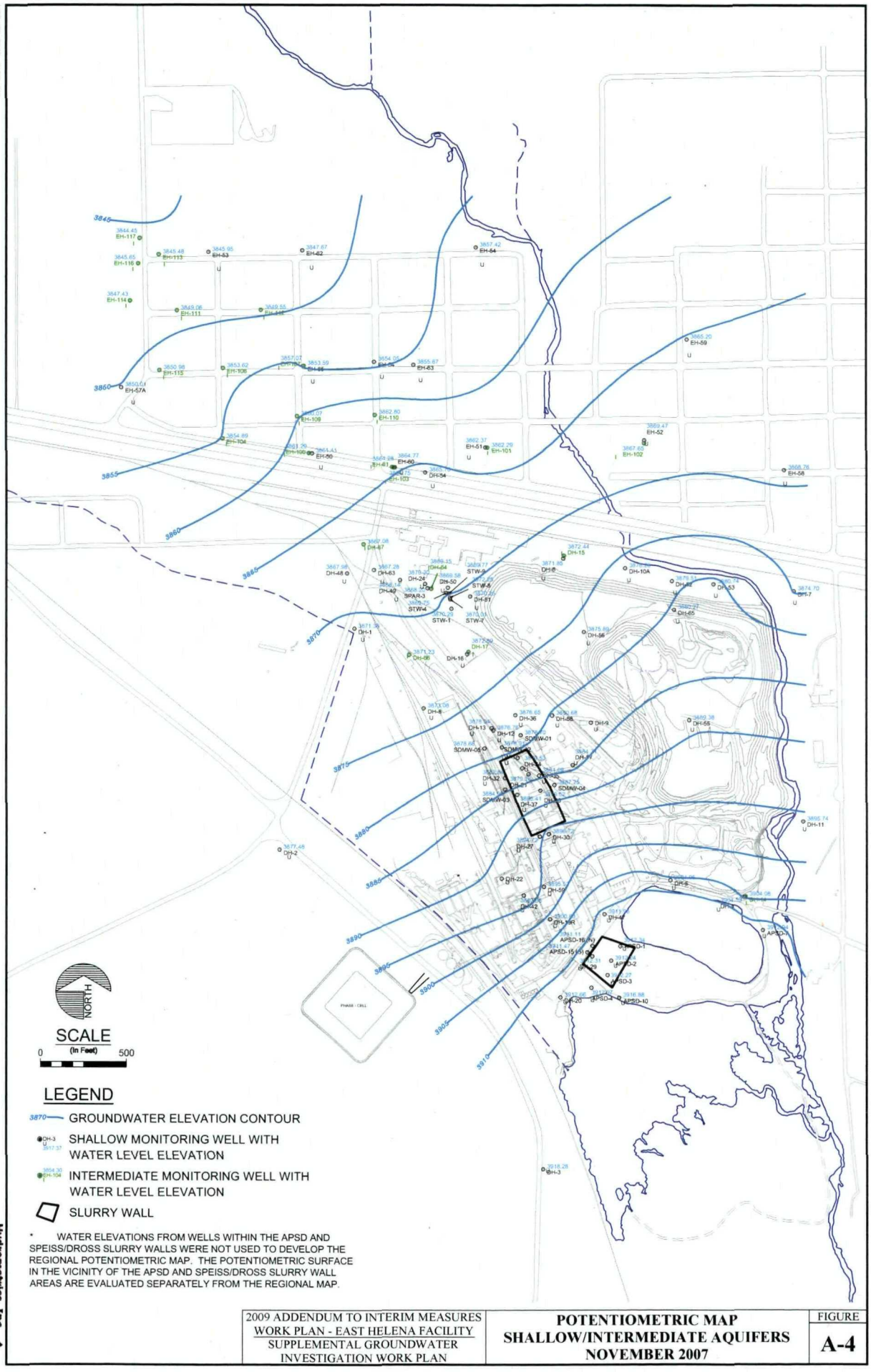

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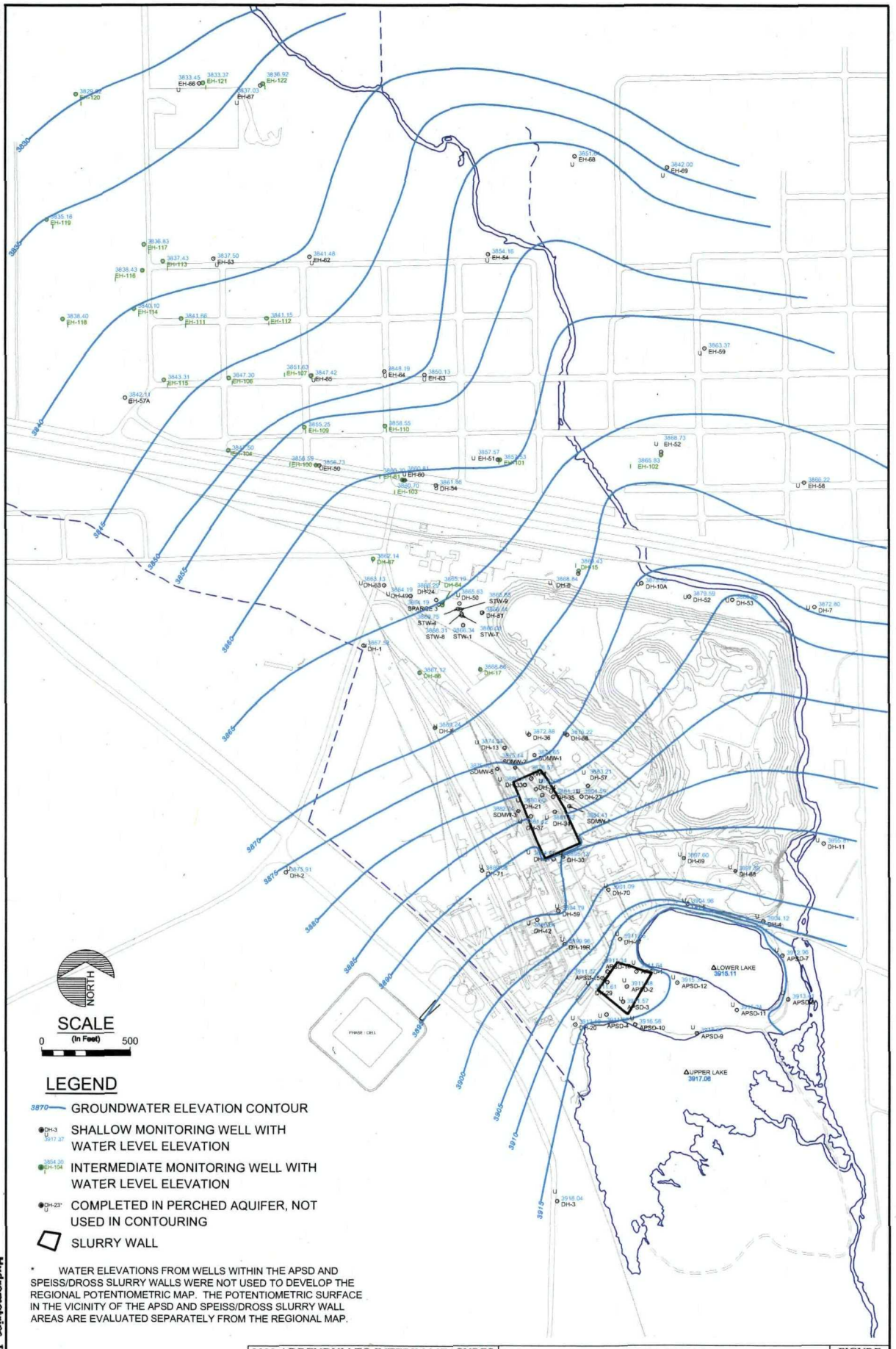
2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**POTENTIOMETRIC MAP SHALLOW/INTERMEDIATE AQUIFERS NOVEMBER 2007**	FIGURE **A-4**



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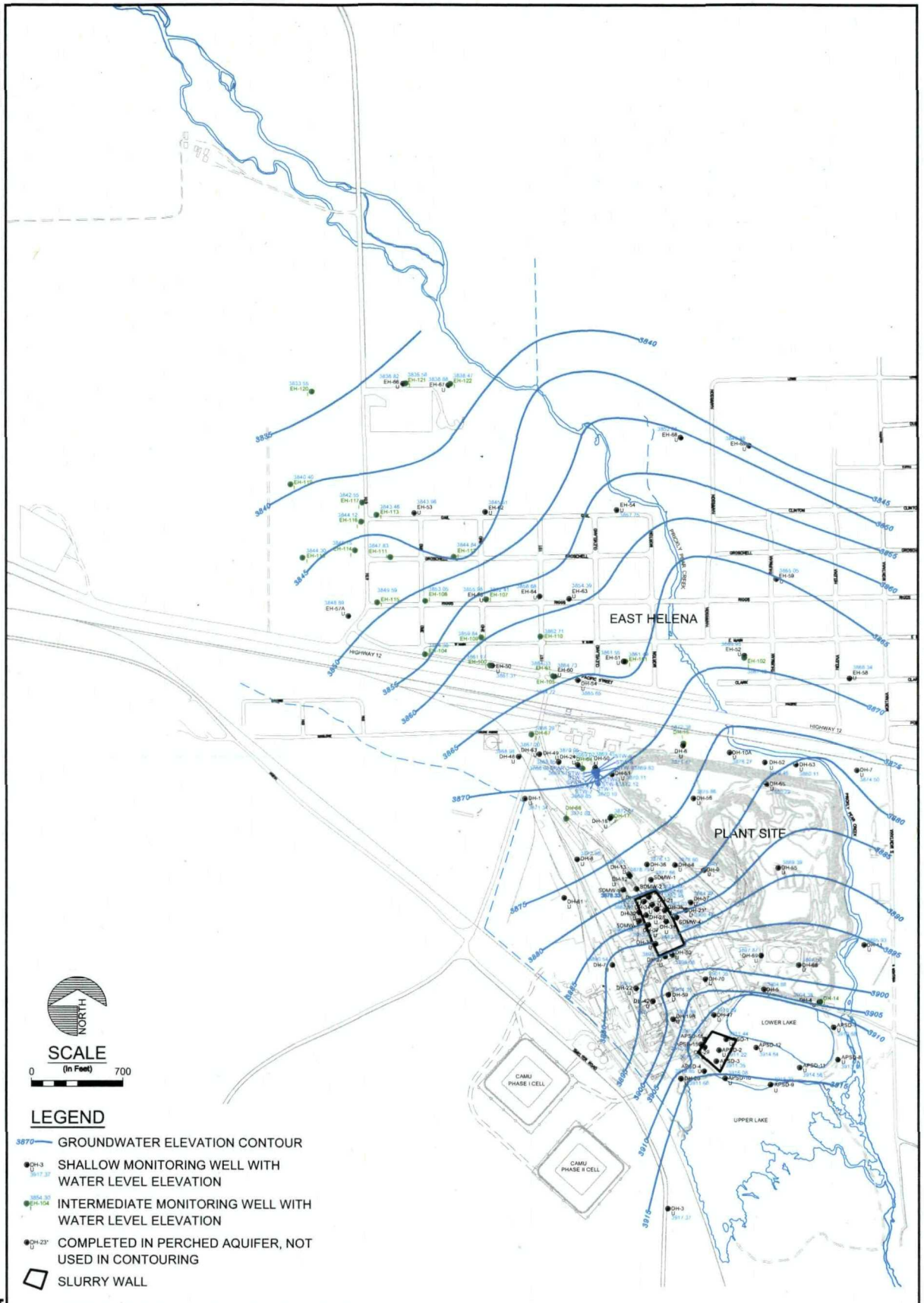
2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**POTENTIOMETRIC MAP SHALLOW/INTERMEDIATE AQUIFERS MAY 2008**	FIGURE **A-5**



* WATER ELEVATIONS FROM WELLS WITHIN THE APSD AND SPEISS/DROSS SLURRY WALLS WERE NOT USED TO DEVELOP THE REGIONAL POTENTIOMETRIC MAP. THE POTENTIOMETRIC SURFACE IN THE VICINITY OF THE APSD AND SPEISS/DROSS SLURRY WALL AREAS ARE EVALUATED SEPARATELY FROM THE REGIONAL MAP.

2009 ADDENDUM TO INTERIM MEASURES WORK PLAN - EAST HELENA FACILITY SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN	**POTENTIOMETRIC MAP SHALLOW/INTERMEDIATE AQUIFERS NOVEMBER 2008**	FIGURE **A-6**

UPDATE TIME: 11:45 AM
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